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Advanced Materials Research  
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## Experimental study of cutting parameter for drilling on fabric carbon / epoxy composite laminates (Conference Paper)

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### Abstract

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This study is mainly about the drilling of carbon - epoxy laminates . Variation of cutting parameter such as feed rate (50,100 and 150 mm/min) and speed(400,800,1200 rpm) were tested in this study . 6 different laminates orientation (0°/0°/0°/0°, 45°/45°/45°/45°, 0°/45°/0°/45°, 45°/0°/45°/0°, 0°/0°/45°/45° and 45°/45°/0°/0°) were tested in order to see which one is the best. HSS twist drill with 4mm diameter was use in this study . The damage of the composites was seen under digital microscope. The aim of this study is to find the minimum force and the minimum damage mechanism i.e.: entry and exit delamination. The drilling process with different parameter of cutting and the orientation were carried out in order to see the influenced of this parameter to the force and the damage mechanism. The general factorial was used to randomise the number of experiment. © (2011) Trans Tech Publications, Switzerland.

### SciVal Topic Prominence ⓘ

Topic: Carbon Fiber Reinforced Plastic | Cutting Force | Tool Wear

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### Author keywords

Delamination Drilling CFRP Laminate Orientation

### Indexed keywords

Engineering uncontrolled terms

Carbon - epoxy laminates Carbon / epoxy composites Cutting parameters  
Damage mechanism Digital microscopes Drilling process Experimental studies  
Feed-rates Minimum damage Twist drills

Engineering controlled terms:

Crystal orientation Delamination Design Digital devices Failure (mechanical)  
Manufacture Steel sheet Turning

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Laminates

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